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BOARD OF MANAGEMENT.

THE usual monthly meeting of the Board of Management of the Jamaica Agricultural Society was held at the office of the Society, No. 11 North Parade, Kingston, on Thursday, 21st October, 1909, at 11.40 a.m. Present: His Excellency Sir Sydney Olivier, in the chair, His Grace the Archbishop, Bishop Collins, Hons. L. J. Bertram, Geo. McGrath, the Director of Agriculture, Messrs. D. Campbell, R. Craig, A. W. Douet, A. C. L. Martin, and the Secretary, Jno. Barclay.

Apologies for absence were submitted from Messrs. E. A. H. Haggart, H. T. Ronaldson, R. P. Simmonds, J. R. Williams and Conrad Watson.

Minutes. The minutes of the last meeting (August) having been published in September JOURNAL, were taken as read and confirmed.

The Secretary said Mr. McGrath had notified him in September that he would be absent from the island for six weeks, and Dr. Pringle had written him in September that he would be absent from the island for about three months. Mr. McGrath had already returned.

Half-yearly Meeting. Mr. Craig, according to notice given at previous meeting, moved that the Half-yearly General Meeting be held in future before the meeting of the Board of Management, if held on the same day, as the Half-yearly meeting was usually so lengthy that members had to leave for their trains before it was finished, and so often missed important business. Mr. McGrath seconded and this was agreed to.

Pound Laws. The Secretary explained that he had not had a reply from some of the Parochial Boards, whose members were considering probable amendments to the Pound Laws, but he hoped to submit suggestions at November meeting.

Instructural Districts. The Secretary reported that the boundary line between Mr. Palache's district and Mr. Smith's had been fixed satisfactorily, except as regards one Sub-branch of South Manchester Branch, which could not be included in Mr. Smith's district as it lay north of the boundary-line, which was otherwise suitable.

Experiment Plots. The Instructor's report on the various Experimental plots in Southern St. Elizabeth and Southern Manchester, were submitted as follows:—

I visited 131 holdings in August and 28 in September. The visits were fewer in September owing to rain and more time being devoted to the several plots. There are three central plots, each an acre in extent; one at TopHill, another at Great Valley and the last at Victoria Town. The Top Hill plot is in growing corn and red peas. It is by the main road leading to Black River and between shops, having the Salvation Army barracks almost directly opposite. Knowing that daily crowds of idlers assemble at this part of the district, I, after much difficulty, obtained this acre of land. The cost to date is £16 15s. 7½d.

The plot at Great Valley is in close proximity to New Broughton Church and School and not far from the parochial road leading to Alligator Pond. No better spot could have been offered by Mr. Martin, to whom I am indebted for management and all wood for fence.

The Victoria Town Plot gave us a little trouble in respect of not getting promise from Mr. Fitzherbert for the oversight of it, though the land was freely offered. Eventually the Rev. J. W. Grant, of Victoria Town, came to our help, and now under his management, fencing operations have begun.

The small plots on settlers' land are fourteen in number. The following list with what is grown or is intended to be grown may be of use: W. J. Thomas, Plowden Hill, tobacco; Nicholas Newell, Plowden Hill, tobacco; Cecil Cassel, Marlie Hill, tobacco; John Brown, Alligator Pond, tobacco; George Cohen, Salmon Town, coffee and oranges; George Murray, Grove Town, coffee and other trees; Rev. W. J. Shaw, Port Mahone, tobacco seed bed; W. P. Forbes, Yardley Chase, St. Elizabeth, coffee and bananas; S. Parchment, Southfield, yams and potatoes; R. Honeghan, Belle Vue, coffee and fruit trees; William Witter, Rose Hall, coffee; Henry T. Reid, Great Pedro, cotton; H. W. Lynch, Pedro Plains, cotton; Rev. A. L. Bodfish, Lititz, cotton and cassava.

Actual work has been done in almost every case and hope is entertained that all will be in good form shortly.

The distribution of plants has been a gigantic task. Twenty-four districts in St. Elizabeth were supplied and 962 persons from those districts received corn, seed, and peas; the Pedro Plains people being about two-thirds the number and getting little over one-half of the total amount expended. At a single distribution at the Cross Roads, Pedro Plains, 381 persons were supplied; in another, 171. I took advantage each time of the opportunity and addressed them before the work of distribution. I am satisfied that nearly every grain is planted, judging from the numerous (and some of them very large) fields of growing corn and peas that are to be seen in an area of about 18 square miles in the Pedro Plain district; there are about 500 or 600 acres in growing corn and peas—quite above the state of things as far back as nearly 10 years ago. The fields are beginning to show hopeful signs for a return of prosperity. The people have much to be thankful for, both as regards the copious rains and the relief by way of seeds and plants. The total amount expended is £41.5s. A detailed account in this and for work done in Plot No. 1, and on small plots, can be submitted at any time.—E. J. SMITH, Agricultural Instructor.

The Secretary also submittad a detailed statement of the Relief Fund to date.

Satisfaction was expressed at the work done and the progress made so far.

Direct Line Contract. Mr. Craig explained that at the previous meeting, Mr. Muirhead brought up the question of the new Direct Line

Contract, for which tenders were to be asked, and suggested that the Governor be asked to forward the conditions proposed to be laid down for the Board to express their views upon it. It was on his (Mr. Craig's) suggestion, agreed to let the matter lie over until His Excellency returned to the island and could be present at a meeting of the Board.

His Excellency said the contract had not yet been drafted nor tenders received. What had been done was, that the Government of Jamaica had written to the Secretary of State for the Colonies suggesting that tenders for a contract service between Jamaica and England should be called for, with a call at Bermuda going and coming. There were also alternative proposals, and the tenders will be open tenders. The only stipulation suggested was with regard to having separate cold storage for oranges and other classes of citrus fruit and bananas. The freight rates would be left open and the contractors would be left to procure their bananas in their own way. Any stipulation as to the carrying of freight was absolutely open to the companies, but in view of the fact that so many producers are interested in the carrying of citrus fruit, he thought it right that there should be such a stipulation as he had mentioned. He found while in Bermuda that there was no fruit whatever, all the fruit trees having been cut down in order to get rid of fruit flies, and he thought that the opening of a fortnightly communication with Bermuda would cause a lot of tourists who go there to come on to this island. Then there were different varieties of fruits and vegetables, which we could send to Bermuda, such as bananas, tomatoes, etc., which they would require there. The conditions of tender would be prepared as soon as possible, and as soon as they were prepared, if there was any point on which the Society wished to be heard, they would have an opportunity of expressing their views.

Mr. Craig: Can you say, sir, if there is any chance of the Imperial Government continuing the subsidy?

His Excellency said as far as he knew, the Imperial Government were only willing to give payment for postal facilities. It was felt that the object of fostering the fruit trade by the payment of a subsidy had been served. But there was a hope that the Imperial Government would contribute more money than would be given by Jamaica and Bermuda in view of the facilities which their naval and military officers would enjoy. No fixed subsidy would be offered, but companies would be asked to mention an amount for which they would undertake the service.

Mr. Martin said what Mr. Muirhead wanted to know was whether this Society would have an apportunity of discussing the terms of the contract before it was signed, and so avoid the mistakes of the last occasion.

His Excellency said he did not think the Board could claim more than the Legislative Council. He, however, assured the So-

ciety that they would have an opportunity of expressing their views on the contract when the time arrived.

Mr. Craig thought that the statement made by His Excellency was very satisfactory. The call at Bermuda would be of great advantage to us. He did not hope for any subsidy being granted by the Imperial Government for the carrying of bananas, as that object had already been well served.

Instructors' Committee. The following report of the Instructor's Committee was submitted :—

The Instructors' Committee met at the office of the Society on Wednesday, 20th October, at 3.30 p.m. Present: The Hon. Director of Agriculture, in the chair, Messrs. R. Craig, D. Campbell, A. C. L. Martin and the Secretary.

Apologies for absence were received from the Hon. R. P. Simmonds and Mr. J. R. Williams.

The Committee beg to report that having reports of the Instructors with plans of their proposed work for next year before them, together with a map of the instructural districts, they have considered the whole work being done, and desirable extensions of work and would recommend :

1. That the instructural district, including St. Catherine and Clarendon, under Mr. Hirst, who gives 15 days a month at £250 a year, should be divided, and an Instructor appointed for each parish. That Mr. Hirst should devote his whole time to Instructural work in Clarendon for £300 a year; that a new Instructor be engaged for St. Catherine at from £200 to £250 a year, according to capabilities.

2. That as regards the eastern district, comprising Portland, east of Port Antonio, and St. Thomas east of the Morant River, Mr. Wates, who gives 9 days a month for £150 a year, having been found on trial, a capable Instructor, should be engaged on full time at £300 a year, that a working assistant should be engaged for the cocoa nursery at Bath at £100 a year, who would attend to the nursery and devote himself to the cocoa industry generally under the supervision of Mr. Wates.

3. That the work of Mr. E. J. Smith, being reported to be satisfactory, it is recommended that he should be re-engaged next year on the same terms, and for the same district, comprising the southern parts of St. Elizabeth and Manchester, south of Malvern and Newport, Mr. Palache continuing to take the larger northern part of these parishes. To carry out this work the Government should be requested to renew the appropriation for the work in South Manchester and South-east St. Elizabeth.

4. That Mr. H. Q. Levy's work, having been on trial, found satisfactory, he should be re-engaged for the same district and made a first-class Instructor at £300 a year.

5. That the sum of £50 be placed on the estimates of the Society for next year, to cover the judging of the Prize Holdings Competition.

6. That provision be made for the upkeep of the Central Experimental Plots in St. Elizabeth and Manchester.

It is understood that these sums as Instructors' remuneration represent salary and travelling expenses.—H. H. COUSINS, Chairman.

On the motion of Mr. Craig, seconded by Mr. Bertram, this report was adopted and the Secretary instructed to submit the proposals involving finances, to the C.S.O. with the estimates.

Praedial Larceny. The Secretary submitted letters from the C. S. O. as follows :—(a) No. 9486/11750, of date 22nd September,

1909, submitting copy of Law 4 of 1909, *re* Praedial Larceny, which the Secretary stated he had published in the JOURNAL for October.

Soy Beans. (b) No. 12361, of 29th September, 1909, being letter from Sir Alfred Jones to His Excellency, dated 6th September, bringing to his notice the importance of the Soy Bean, and suggesting it might be of economic use in Jamaica.

The Secretary stated that he had already published an article on the subject in the October JOURNAL, and he thought it might be useful as a garden crop in place of English Green Peas, which the variety tabled resembled in appearance and flavour. There were several varieties.

The Director of Agriculture stated that experiments in growing the Soy Bean at Hope Gardens, had not proved successful and this bean would not be an agricultural crop for Jamaica.

Refrigerating Certificate. The usual certificate from Elder, Dempster & Co., that the S.S. *Port Kingston* had complied with the requirements for cold storage, was forwarded by the agent, Mr. E. A. H. Haggart.

Carriage of Oranges. The Secretary submitted letter from Mr. Fursdon as follows :—

"I arrived safe in England on the *Port Antonio* and what I saw on her in the way of bananas and oranges might interest you. The forward hold had bananas only and the after hold had bananas and a good quantity of oranges. This gave me an opportunity of looking into the much-discussed question of bananas and oranges travelling together, and the officers of the ship were very kind in giving me much assistance. In short we arrived at Avonmouth with the bananas in the forward hold in perfect condition and those in the after hold a dead loss. The history of the latter is, that on the sixth day out, some of the bananas shewed signs of ripening ; the next day some had to be thrown overboard and the remainder arrived in Avonmouth over-ripe and watered.

Now why should this have been so ? About ten days out it was discovered that there was a gas generating in the hold that not only put out a light, but choked the man who was carrying it, and it must have been this gas that had been making it impossible to sufficiently lower the temperature, and in fact was causing it to rise. I suppose this gas was produced by the process of the oranges ripening. I am told that later in the season when the oranges are shipped less green, they do not do so much harm. At my suggestion some of the gas was collected and will be examined. The suggestion that the bananas should be separated by the bulk-head from the oranges, seems impracticable, because unless the expense of a separate plant was incurred, it would simply mean the circulation of the same air poisoned with the gas. I think the oranges would not be able to accumulate so much gas if they were packed differently ; that is, with a view to the circulation of the cold air through them. The United Fruit Company seem to realise this—the oranges packed by a well known gentleman in Manchester, seemed to have been packed with utter disregard for this. His crates are made of one piece for each side, and the rose apple bands are very thin, consequently the only openings are at each edge of the crate, and they pack so close that they practically form a solid mass, through which it is hardly possible to force cold air, or for the hot air brought with them on board, to be forced out. Orange crates should be in two pieces for the sides, and the band should be sufficiently thick to keep the crates apart, or, as is done elsewhere, cleats might be used for this special purpose. I hope you will be able to look thoroughly

into the matter of bananas plus green oranges, because if it is impossible for them to travel together. the sooner the fact is realised the better."

Mr. Cousins said that he had travelled out on the *Port Antonio* and he found Captain Selfe, a very keen officer, very anxious about the matter, as his company had lost £1,000 on the shipment referred to by Mr. Fursdon. The Captain had tested the gas in the hold with lime water and found it to be carbonic acid gas, which the Captain was of opinion generated from green and rather soft oranges and which he also thought had the effect of causing bananas to ripen prematurely. He had promised, for the information of the Company, and in the interest of the growers in Jamaica, to carry out some experiments on the subject; they were now working at the laboratory testing whether bananas are really affected by gas given off by oranges in this way: the results of which experiments would be submitted in due course.

Freight on Oranges. The following letter from Mr. Ventresse was submitted :—

Board of Directors, Jamaica Agricultural Society.

"Valetta," Darliston P.O., September 11th, 1909.

I see by advertisement that the Jamaica Government Railway have reverted to the old and extortionate rates for the conveyance of oranges. Have the Board any influence with the Railway authorities to have the lower rates restored? Or does the Board think that oranges can stand such a rate? If so, may I point out that banana freight is lower than orange freight, yet bananas are nearly if not always sold or handled at a profit by both grower and shipper, while the reverse is true of oranges.

I should be glad to know if the Board can do anything in this matter. —A. B. VENTRESSE.

After discussion, on the motion of Mr. Craig, seconded by Mr. Campbell, the Secretary was instructed to ask the Government that as it was understood the schedule of rates on the railway was being revised, the proposed rates on agricultural produce should be submitted to the Agricultural Society for them to express their opinion before the rates came into operation; and the Secretary was further instructed to bring to the attention of the Government, that the matter of the rates for carrying oranges on the Railway had been discussed and ask whether under the peculiar circumstances of this industry, on which large districts depended to a great extent and had nothing to substitute for it, the Government would not grant more favourable rates than at present.

Importations of Bees. The following letter from Mr. R. S. Gamble, was submitted :—

Kingston, Jamaica, 13th October, 1909.

Some time ago, at the suggestion of Messrs. Gillespie Bros. & Co., I proposed that certificates should be issued by the Agricultural Department to the effect that the Bees in this Island were free from the disease known as "Foul Brood," and your Society kindly took the matter up, and such certificates have been issued.

It has just come to my knowledge that some Bees have been imported, and it seems to me quite possible that the very serious disease mentioned may be brought into this Island along with such importations,

which would mean a very terrible drawback and loss to all engaged in this industry.

I respectfully suggest that the Agricultural Society should take this matter up, with a view to see if it would not be desirable to initiate legislation prohibiting the importation of Bees with the exception of Queens, which I understand, can be easily treated on arrival here, so as to prevent the possibility of their carrying the infection of Foul Brood.

There is no necessity whatever to import Bees into Jamaica, and the Bee-keeping Industry has grown to such important dimensions that it is well worth while taking special pains to protect it from any possible risk. —R. S. GAMBLE.

The Secretary stated he had written the Collector General to see if he had any note of bees having been imported other than queen bees, but had had no reply yet.

On the motion of Mr. Bertram, seconded by Mr. Douet, it was resolved to recommend to the Government that bees other than queen bees and their necessary companions, should be prohibited from importation and that queen bees should be, if possible, quarantined or disinfected.

Prize Holdings Competition. The Secretary submitted resolutions from St. Thomas-ye-Vale Branch and from Glengoffe Branch, asking for the extension of the first class in the Competition to include *bona fide* small settlers who owned up to 50 acres of land.

The Secretary said these had been submitted to the Staple and Minor Products Committee, and they had considered that it was not advisable to permit this extension, nor even to make another class for holdings between 20 and 50 acres. The extension would mean more money. The matter was held over for further discussion.

On the same subject Mr. Ventresse wrote asking whether it was known to the Board that men holding more than the number of acres in a class, had competed and won prizes.

The Secretary stated that every round of the Competition the requirements of the rules had been more strictly inquired into, but that at first some of the competitors had read the rules very widely. Then again, it is common for men to hold several pieces of land, perhaps bought after the original holdings, but it was within the spirit of the rules for them to enter the one holding with the house on it in the class according to its acreage.

It was decided to bring the matter of the rules of this Competition up later for any revision thought necessary.

Rubber. Mr. Craig said he had given notice to the Secretary to place on the agenda that he would bring up the question of the report of the Director of Agriculture on Cotton and Rubber in Jamaica, as published in the *Gazette*. He did not say, as he did not know, that Mr. Cousins might not be perfectly right in making the statements he did, but he happened to know that large sums of money had been invested here in rubber planting. It was only within the last four or five years that there had been rubber-planting to any extent done here, and three of these years were years of drought. Mr. Cousins might be quite right in giving off these ex-

cathedra statements, but he would ask him to give them some data for these statements.

The Secretary also submitted two further letters he had received on the subject :

Mr. A. B. Ventresse wrote of date: On pages 261 and 262 of the AGRICULTURAL JOURNAL for July, I read: We can supply cotton seed, etc., the Society is prepared to supply seed and pay cost of cultivation, etc. We have districts to which cotton would be a valuable asset if it were grown. This year a few cultivations of cotton in Jamaica have done well. In the supplement to the *Jamaica Gazette*, September 2nd, p. 272: I would add cotton to the *Index Expurgatorius* of economic crops for Jamaica. . . . Cotton cultivation is one of the most speculative and uncertain agricultural enterprises ever attempted in Jamaica. This by the Director of Agriculture.

Will the Board be good enough to reconcile these statements. If not, why not ? And what is the economic effect on the Island ? And in the opinion of the Board, should cotton be condemned in this manner ? And is it to the general interests of the country that such statements should be issued with the authority of the Director of Agriculture ?

On page 271 Supplement to *Jamaica Gazette*, September 2nd, the Director of Agriculture says: I am unable to recommend the cultivation of any rubber-producing tree yet tested in Jamaica. Is it not to be inferred from this that all the rubber planted will be a failure ? If not, why is it written ? On page 292 same issue: Planters have been ill-advised to spend money thereon. Who advised this planting ? Same page: Castilloa is apt to die if tapped at all severely. Is there good evidence of this, and if so, why is it not published, and is it from Jamaica experience ? Same page: Rubber as a shade for cocoa has proved most pernicious ? Does this apply to Tobago and in what way is it pernicious ?

Is this wholesale condemnation of rubber a good policy for the Director of Agriculture to pursue at present ? And what is the effect on the value of properties ?

Sir Edward Cornwall, Chairman of the Jamaica Estates Company, says: Arrangements will at once be made for the supply of rubber plants. . . . We have instructed Mr. Farquharson to proceed with the planting forthwith.

Whose duty is it to tell these outside investors that they don't know what they are doing ? Surely they should be protected against themselves ! Will the Society advise ?

I address this to the Board because I think the Society should make some move in the matter.

Mr. R. E. Gillespie of Clyremont, Falmouth, wrote of date 19th Oct., 1909, saying he had determined to give up cotton growing for two reasons—(1) that no one in his district would take up the industry, though to be successful it needed a certain amount of co-operation and (2) he was disgusted with the report of the Director of Agriculture on cotton, as published in the *Gleaner* of September 3rd. It might be correct for other parts of Jamaica, but he believed from experience that cotton was a most useful, safe and profitable crop in his district. However, the above-mentioned report will effectually damn all hope of anybody trying it, so I must drop it also. I shall give off my September crop in a few days and shall then be ready to hand over the gin.

The Director in reply said : Hevea plants had been regularly issued to the public from his Department for over 25 years, but there were no large trees to be found anywhere, although Castilloa trees were growing freely from similar means of distribution. The largest Para rubber tree in Jamaica was at Castleton Gardens and is now 30 years old. It should yield at least 10lbs. of

rubber per annum, if Hevea was a normal tree for growth in this island. Castleton has the closest approximation to a Brazilian rubber climate of any district in the island. This tree yields latex with great difficulty and refuses to give an appreciable yield of rubber. The manager of some very large Para plantations in the East, inspected growing Para rubber trees in various parishes of Jamaica in March last. He told him (Mr. Cousins) that our six-year-old trees were only equal in size to 16 months' trees on his plantations. He also stated that lack of rain for 10 days is a serious set-back to Hevea as grown on modern lines for rubber production. His conclusion was given to him: "Jamaica is quite unsuitable for Para rubber." A Belgium syndicate went in largely for Para rubber plantations near Port-au-Prince in Hayti, some eight years ago. The manager was personally known to him, and on a recent visit to Jamaica, he informed him that this rubber tree failed to produce a normal bark and latex in Hayti, and the Para rubber had been given up for cocoa, which was doing well.

The greatest interest in rubber-production in the West Indies, had been evinced in Trinidad. The climatic conditions in Trinidad were more favourable for Para rubber than those of Jamaica. The managing partner of one of the largest properties in Trinidad, was good enough to tell him of their experience of Hevea and Castilloa when this gentleman visited Jamaica last Spring. He stated that he was quite satisfied that the Hevea they had planted, on quite a large scale, could not be a commercial success and he regretted the money expended on this exterprise. He also informed him of the serious injury to his cocoa trees by planting Castilloa rubber as shade. The climate of Jamaica had too low a mean temperature and too great fluctuations in humidity and rainfall to reproduce the conditions in which *Hevea brasiliensis* grows naturally in the Valley of the Amazon and those in the East, where cultivated Para rubber is at this moment coining money for the enterprising planters who had created this industry. The mere growth of a rubber tree and its ability to yield latex capable of giving rubber in a commercially profitable quantity, are two different things, and there was every reason to believe that while we could grow Para rubber trees here of poor and stunted dimensions. that it was not possible in Jamaica to grow *Hevea brasiliensis* so as to yield good latex freely. That these were the considerations that led him as a matter of duty to the public, to record the opinion which has been called in question. With regard to *Castilloa elastica*, the chief points he made were as to its being a serious source of vermin (scale insects) and of its "sucking" cocoa when planted as shade for that crop.

Mr. D. Campbell said he had visited Costa Rica and found Castilloa Rubber trees there that had been tapped and tapped for years with rough treatment until they were all scars and yet they did not die. He learned from there that there were several varieties and he thought we had been supplied from the Gardens with the wrong variety. He had a goodly number of Castilloa rubber trees and they had grown splendidly and never suffered from white scale. He

should now like the Department to tap the trees systematically and settle the question whether they would yield rubber in payable quantities or not.

The Director of Agriculture said: he had been looking into the matter and found that the Castilloa plants that had been supplied here came from Kew, and were of the best variety. There was no doubt at all that they had the right sort. With regard to the tapping of the trees, the Department could send Mr. Cradwick to tap them.

Shows. The following applications for grants to Shows were made :—(a) Porus, 30th December. (b) Appleton, 1st January. The Glengoffe Branch notified that the date of their Show had been altered from the 24th to the 17th March.

These were granted, subject to compliance with the rules.

Affiliation. Frankfield Agricultural Society (Clarendon) applied for affiliation. The Secretary stated there had been a Frankfield Branch before but it became defunct and was now reorganised. Affiliation was granted.

Seeds for Gardens. The Secretary submitted letter from Mr. R. M. Arnold, teacher at Catadupa, stating that he was trying to encourage his boys growing home gardens, and asked whether the Society could help him with seeds or prizes.

The Secretary was instructed to help with seeds if he could, and the Director of Agriculture stated his Department could probably help if applied to.

New Members. The following new members were admitted :— H. Stead, Gordon Town; Rev. Jas. Martin, Spur Tree; H. T. Steel, Duncans; G. Casserly, Jackson Town; A. W. Gordon, Duncans; A. Dalrymple, Rio Bueno; Jno. Casserly, Rio Bueno; S. L. Bernard, Falmouth; F. W. Cooper, Cave Valley; H. S. Hoskins, Duncans; R. V. Malabre, Kingston; G. H. Leader, Montego Bay; Lester Willensky, Oracabessa; Thos. Guardia, Liverpool, England; W. H. Bradley, Dutch Guiana, South America; D. Samuels Reid, Blue Mountain Valley; Charles Williams, Kingston; Mrs. K. H. Bourne, Kingston.

The meeting adjourned until 18th November, 1909.

COFFEE AND CACAO IN CLARENDON.

"Don't Thrive as Beforetime."

Quite recently I was asked by Messrs. Thos. Abrahams & Co., of Chapelton, to visit two holdings in the Frankfield District, the owners of which were complaining of poorer crops, and that the plants were not thriving as before.

This is a complaint which is becoming more and more general throughout the island; on rich land and poor land, in seasonable and arid districts; and more particularly so perhaps in the older dis-

tricts of Upper Clarendon, such as Frankfield. In the older districts of St. Catherine also, these conditions are perhaps even more noticeable.

It is a matter of such importance to the island, that I think it is necessary that we should trace this decay (which really exists) back to its natural causes ; and do everything in our power to arrest it.

I consider it even more important and of more immediate benefit to the island than the stimulation of increased planting.

And to at once arrest decay and its natural sequel, disease, will also be of the greatest permanent benefit.

The manure question is a very important one, but I consider it is not always the first one to be tackled. Until the whole system of the plant and the field is in good order, the one cannot assimilate the plant-food, and the other cannot offer it in an assimilable form.

When the plants are convalescent, then put in the nourishment (manure) with a will.

Whilst the causes of this decay are somewhat similar in all districts, I propose to deal at present with those appertaining to the richer and more seasonable areas of Upper Clarendon.

In most, if not all cases, the present decline can be traced to a natural sequence of events extending over a number of years—it may be ten, it may be thirty, or even much more.

1. In the beginning we have rich land and a seasonable climate.

Consequence.—All or most of the plants grow, thrive, and yield heavily, and none are destroyed.

There is a temptation to plant everything as everything seems to thrive, without consideration of the needs and future growth of what is there already.

2. Profuse growth unrestrained for a number of years, and abundant crops.

3. Overcrowding occurs. Air and sunlight can not get in. In fact the field has the appearance of a dense jungle.

Consequence.—Weeds hardly grow in the dense shade, and less and less attention is paid to weeding and other cultural operations.

The former planter and cultivator has now become a reaper, and the habit grows on him ; or more probably the plantation has descended to sons, who from childhood have been accustomed to reap, but know less of the art of planting, and still less of that of cultivation.

4. The crops gradually decrease. The trees bear only at the tops and on the outer branches, or wherever they can get a little air and sunlight.

5. A mass of useless wood is formed. The trees become choked, a mass of small twigs and shoots, and interlaced with one-another.

Consequence.—Die-back sets in : fungus and lichens grow upon the trees, and that curse of Upper Clarendon and parts of St. Catherine : mistletoe or God-bush.

6. The trees lose their branches ; the bark and trunks become unhealthy, the leaves become fewer, smaller, and of a bad colour. The roots, owing to the continual moisture, lack of air and light, become affected.

Consequence.—Crops almost cease. Trees become a mass of dead wood, many die.

7. The final result is a plantation showing patches with good trees giving a fair return—patches of half-dead trees yielding a small crop on its few remaining bearing branches—patches of dead and dying trees, commonly called galls. Oftentimes where formerly we had too much shade we now have too much sun.

8. A new trouble now presents itself, due to a factor that has to be well considered in Upper Clarendon, as in all rough and mountainous districts. This is detrition, or the washing away of the surface soil.

It has been going on gradually all the time, but its effect has not been marked. Now, owing to the large galls, and the barer condition of the rest of the field, more frequent weedings are required. The soil naturally gets worked down the hill. Upon the galls especially, there is nothing to check the flow of surface water, carrying soil and manure with it, over the ground which has now become hard and compacted below. Owing to deforestation or other causes, we have not the same steady rains as before ; but periodic downpours following dry spells, which leave the ground baked and hard, just in a condition to allow the washing away of the surface soil, loosened in weeding, and the trash and litter lying about.

Consequence.—The nourishment and tonics needed to build up the impaired vitality of the field, are washed away to the rivers and the sea, a total loss to the island. The subsoil is now left bare, possibly a clay and a cold one.

There is no longer the foot or more of rich loam, mostly decomposed vegetation or humus, in which the plants can live and thrive and take little heed of the cold compacted subsoil below. The plants remain stationary, or still continue to pine away ; and in the case of the clay subsoils further root troubles now set in, due to already impaired vitality and the fact of the roots being compelled to extend themselves into this inhospitable soil in search of nourishment.

There is one more consequence that cannot be neglected. Some of the plants were originally set rather deep, cultivation and the wash have buried them still deeper, creating unhealthy conditions. On the ridges, others are left bare and stranded, an equally unfavourable condition.

With the history and causes of decline brought thus fully to their attention, I feel sure that most planters will be able to remedy the consequent results and take precautionary measures ; but for the help of those who may need further advice, I propose to deal with this in another article.—J. Hirst, Agricultural Instructor, 4th October 1909.

YAM CULTIVATION:

HILL CULTIVATION VERSUS BED OR LEVEL CULTIVATION.

THE Yam is one of our chief foodstuffs of Jamaica. Upon it a great majority of the inhabitants depend for support, herefore the greatest attention should be given to the best mode of cultivating it. However, like many of our other Jamaica products, the yam in its mode of cultivation, has suffered very much through the conservative ideas of a conservative race in a conservative age of agriculture.

The yam has been cultivated long years ago in Jamaica, but in many districts of this island, its present mode of cultivating is just as old as its introduction. With great tenacity, many still cling to the way their forefathers have gone. "The way was good five hundred years ago and must be good now;"—so reason the conservative planters of to-day.

In this short treatise, I, shall not pretend to give a detailed account of yam cultivation, or deal individually with the various species of the family of *dioscorea*, but shall only deal with the subject as nominated in heading: "Hill or Bank Cultivation *versus* Bed or Level Cultivation." The old way, which in various places is still extant, was as follows: A patch of land was cleared and banks or hills made. In each of these, three to four plants were put. No attention was paid to the regularity of the hills. If a strong tree was found, then a good many hills were dug around that one. Now let us look at the disadvantages.

1. Improper circulation of air and light. Now we know that plants get much of their food from the air through the medium of the leaves. Light is essential to enable the chlorophyll of the leaves to perform their work.

2. Liability of great damage by wind., It cannot pass freely out, but is continually being obstructed; great damage is therefore wrought.

3. In rainy weather the banks or hills are generally washed down by rain, and in many instances exposing the yams and their roots to the sun. Both are injured. In dry weather the hills allow too much of free drainage and in many cases the vines were burnt near where they came out of the hills.

4. The yams undergoing these various disadvantages, are slow in coming in, and are of inferior size and quality.

As the minds and taste of men began to be a little more cultivated, beauty and style began to engage their attention. The banks or hills were afterwards dug in pairs in regular rows. A better sight was then presented. It was more pleasing to the eye. Little did they know at the time that they were overcoming disadvantages 1 and 2, and slowly helping to lessen disadvantage 4 in the first plan. Incidentally or indirectly the lesson was taught, and

the plan began to be followed. Disadvantage 3 still remained a great bugbear.

Some thought that the second plan could be improved with greater advantages every way, and so only one bank was made for each pole or stick. This was decidedly better, and returns increased. Many, however, decided not to go any further than the second plan, as twice as many poles would have to be used. The plague or disease of "I can't bother" has in a great measure permeated the class of men following the industry of agriculture. Disadvantage 4 was lessened but 3 remained still.

Now the fourth and last plan represents the modern style of level or bed cultivation, which I have adopted for some years. The ground is ploughed very deep and made in beds of broader or narrower dimensions according to the nature of the soil; those of a clay soil being narrower than those of looser soils. No banks or hills are made, but a plant is put four to six feet apart in the soil, each plant trailing on its own pole. The beds are from six to eight feet wide, with a path of three feet between each. Under this system disadvantage 3 took flight. In rainy weather the rains have no hills to wash down; no yams to expose; no roots to lay bare. Then the soil can be easily mulched in face of approaching drought. The yams come in much earlier and are of superior size and quality. Now one great precaution must be taken under this system, and that is, the ground must be properly ploughed not less than two feet deep and the soil properly broken up. Where each plant is put must be even deeper and free of all stones. Again before I close let me give fair warning; if you cannot take the pains to have the soil properly prepared and everything regular, it is far better to go the way your fathers trod five hundred years ago; for plan last mentioned, will prove a deadlock.—M. J. CHAMBERS, Pisgah School, Springfield P.O., 19/8/09.

INDUSTRIAL ALCOHOL.

THE wisdom of the German Government in fostering afforestation and allowing the chemical industry to have "duty free" alcohol (since 1891), is now very fully apparent. The comparatively small loss of direct duty to that government has been many times recouped by the prosperity which has accrued to the country as the outcome of this farseeing policy. Germany has thereby practically secured the world's trade of dyes, drugs, and artificial perfumes, while to encourage agriculture and to retain within the kingdom some portions of the enormous sums being expended for oil, for lighting and power, the German Government put forward a system of taxation and excise which encouraged the cultivation of potatoes and the establishment of distilleries in potato-growing districts. As a direct consequence, the annual potato crop, which in 1887-91, averaged 27 million tons per annum, had in the ten years to 1901, risen to 40 million tons. About three-fourths of all the alcohol

produced was made from potatoes, thus adding enormously to the area of cultivated land, while at the same time encouraging the settlement of a large population in healthy occupation, and so obtaining a direct advantage as regards the physique of her people over those countries which depend more upon the industries and manufactures confined to cities and towns.

Although grain contains a large proportion of starch, yet potatoes will always be the more economical source of fuel alcohol than corn, because the yield per acre is so much greater, *e.g.*, where an acre of grain will yield 8½cwt. of starch, an acre of potatoes yielding a crop of 125cwt., will give 22cwt. of starch. A ton of potatoes is reckoned to yield up to 30 gallons of 90 per cent. spirit, and bearing in mind that the best potatoes may be sent to the ordinary market and that the remainder fully answers the purpose of the distilleries, it is evident that the value of the potato crop is thus greatly enhanced.

Jamaica can grow economically two of the best sources of cheap alcohol, sugar and starch,—the former from cane and the latter from cassava. As in Germany, if denatured alcohol were substituted for kerosene for lighting purposes, and in place of petrol or gasoline for motor purposes, there would be a small loss in duty and a great gain through increased industrial enterprise in the production of cheap alcohol from cassava. In tests that have been made with motors, in no instance has the thermal efficiency of gasoline been found higher than that for alcohol. Alcohol locomotives as built in Germany, are being used there, and are now also being exported. In Germany the consumption of spirits for industrial purposes in 6 years, grew from 15¾ million gallons per annum to 26 million gallons per annum.

There is a German made incandescent lamp, made in various sizes, from 40 c.p. to 300 c.p, the larger size consuming alcohol to a cost of ¾d. per hour. The selling price of a 60 c.p. lamp, postage paid, parcels post, is quoted at £2 1s.

Amongst the advantages of the alcohol or spirit lamp may be quoted the following :—

(1) There is no danger of explosion.

(2) It is lighted like a gas lamp.

(3) It is available as a stand by in case of the failure of electric light.

(4) For equal illuminating power the alcohol lamp consumes less oxygen, and throws off about one-third of the heat of a kerosene lamp.

(5) If alcohol should happen to take fire, it can easily be extinguished by water.

(6) Alcohol can be carried and stored with less risk than petrol.

We wonder if the day will ever come in Jamaica when we will light our lamps and drive our engines with alcohol, made in the island from sugar-cane and cassava.

The comparatively large quantity of kerosene oil that we now import and pay so much for, could then be dispensed with.

CULTIVATION OF BANANAS:

BEING PAPER READ BY MR. CECIL ABRAHAMS TO THE UPPER METCALFE AGRICULTURAL SOCIETY, ON 23RD SEPTEMBER.

THE most important point in banana cultivation is a knowledge of the soil. You must either have clay, or sand mixed with loam. The former must not be a soapy clay, as it is very difficult to grow bananas on that sort of clay; it can be grown but requires a lot of lime to sweeten it. Lime is one of the best fertilizers, as it sweetens and softens clay, and has binding effect on a light soil. Clay requires entirely different cultivation to loam. I will now deal with clay land. This land should be properly prepared before planting, *i.e.*, it should be cleaned, forked, and trenched. The holes for planting should not be more than 18 inches deep, and as wide as you like, and should be dug a few days before you are ready to plant. Put a little of the soft, loose earth in the hole before planting the suckers. Clay land requires a good deal of trenching so as to drain it as much as possible. If bananas are planted 12 x 12, place your trenches between every other row across the slope, and if you find the land very wet, put in a few outlets, but be careful to place them from one trench to the other in different rows, so as to save as much of the "washings" as possible. Steep hillsides do not require so much trenching, and need not have as many outlets.

Forking.—You should endeavour to get your forking done as deep as you can, and break the clods of earth as small as possible so that they may crumble easily when the sun penetrates them. On no account fork in rainy weather. Your second forking should be done in August, not later, and then cover all rotten vegetation.

The best month for planting is March. (March only suits districts having rich soils, a hot climate and the best seasons. January is not too early for many places, and in the hills over 1,600 feet, it is necessary to plant during November and December to get fruit 16 or 18 months later.—ED.) Every care should be taken in selecting your suckers, which should not be less than five inches in diameter. They should be allowed to drain for at least four weeks before planting. Put in heaps and cover with the root end down. The suckers should be placed in the holes on a slant, and covered perfectly in line with the surface.

Sand and Loam.—This land need not be forked before planting, and in my opinion, it only needs one forking, which should be done about April or May. It does not require as much trenching as clay land, but must have sufficient. If on steep hillsides to catch the "washing," put in no outlet at all, and dig your trenches with a slope toward the hillside and make them 2½ft. wide at the top, 1½ft. at the bottom and 2 deep. This will cost 1/9 per chain, including the spreading of the earth, which should be done in all cases, as the deep sub-soil makes a splendid manure. I have been digging

pits on my steep hillsides 2 x 2, 24 feet apart, which is much cheaper and prevents the land from breaking away, and I find they have the desired effect. Digging and planting should be done the same as on clay land, but the holes should be dug a little deeper.

Cleaning.—This should be done at least four times for the year. Never allow the weeds to get the upper hand of you; more so when the plants are young and tender.

Trimming.—As soon as your plants are big enough to show their best, take out all useless suckers; only leaving the best one.

In the month of October, you should select and leave your suckers for the ratoon crop.

If you decide on leaving two, try and get them of uniform size, on either side of the plant, it is no use leaving water suckers, or those that have already been cut. When forking a light sandy soil, let them break the clods of earth as big as they possibly can as they will retain a certain amount of moisture and will easily crumble away.

Cost of Cultivating One Acre for the First Year.

	Clay.				*Loam.*		
	£	s.	d.		£	s.	d.
Preparing Land	0	10	0	-	0	10	0
Forking @ 2/6	1	5	0	@ 2/-	1	0	0
Re-forking @ 2/-	1	0	0	@ 1/6	0	15	0
Cleaning 3 times @ 1/-	1	10	0	@ 1/-	1	10	0
Trenching 30 chs. @ 1/9	2	12	6	20 chs. @ 1/9	1	15	0
Purchase of suckers	0	12	0	-	0	12	0
Planting @ 2/-	0	6	0	-	0	6	0
Trimming four times	0	2	6	-	0	2	6
Miscellaneous	0	8	0	-	0	8	0
	£8	6	0	-	£6	18	6

FLIES.

As a country we are not troubled with house flies in Jamaica more than ordinarily,—in fact we are not so much troubled in this way as northern countries are in summer—our trouble lies more in the way of ants.

Nature is determined that we shall not live too easily, and life is getting a most fearful and complicated thing now. What with rats being the carrying agency of bubonic plague, dog and cat fleas carrying any sort of contagious and infectious diseases from house to house, aud from person to person, and the common house fly being the special distributing agent of typhoid fever, which has been rife in many districts in the island lately, the war is being carried into our very houses under our noses, as it were, like bad water. Bad enough having to suffer from scale insects on our trees, ticks on our cows, and rats at our cocoa (besides smells from Yallahs Ponds) but

to have it so brought home to us that flies alternate visits between unsavoury places unmentionable, and our sugar, our pudding, our cake, also incidentally bathe in our milk and commit suicide in our jam—well life now is getting to be full of known horrors !

A man who can with equanimity see his cocoa trees choked to death by bush and fungi ; his cows sucked to anæmia by ticks, may perhaps also be able to sit down calmly with fleas on his floors, and flies on his food, but that will only be if he does not read current literature at all; if he reads of the horrors that surround us and will compass the lazy and indifferent, there should be no peace of mind for him.

In connection with our Prize Holdings Competition, many settlers are improving their sanitary conditions, the judges in the competition are getting more and more particular every year on the point of cleanliness of the holding, as competitors better understand what is required of them now, and there are many points involved in sanitation now that were passed over in the first years of the competition. The eyes of the judges at once perceive whether pigs are allowed to make their beds below the house; whether there is a closet, and its position (it should not be close to the house), where the dirty water is thrown, and in the future possibly, even more matters will be taken into account,—whether dogs are ever washed for fleas, whether earth is used in the closet, whether rat traps are used, etc.

House flies as was pointed out in an article in the JOURNAL for September, do not breed in the house but in filth in the immediate vicinity, and it is not a pleasant thing to contemplate that flies may visit the closet and then take a trip to the milk for a drink.

We are trying to help readers to fight all sorts of pests. The best of all exterminating agencies for all kinds of flies, is a weak solution of Formaldehyde (*Formalin*) in water, and the proportion to use is two teaspoonfuls of commercial Formaldehyde to a pint of water. We have not tested this for fleas and ants yet, but flies are attracted by a weak solution which they drink. It is so deadly to them that some die in the water, others are only able to crawl to the edge of the plate or a little further, but it has such an effect that where there are large quantities of flies hundreds of dead may be swept up around a plate of Formaldehyde.

Formaldehyde can be had from chemists, but it will be noted from the advertisement in this JOURNAL that Messrs Wessels Bros. are keeping commercial Formaldehyde wholesale at 6d. per lb. Formaldehyde is not a poison in the ordinary sense of the word, and can be used safely in the household. It is one of the best antiseptics and disinfectants. It does not, however, fulfil all the purposes that coal tar disinfectants are used for, a typical example of which is Jeyes', but in certain directions it does what they cannot do.

An antiseptic is a substance which prevents or checks the growth of the bacteria which cause putrefaction or disease ; a disinfectant and deodorizer is used for a similar purpose, but also to ab-

sorb moisture and disagreeable odours which may have developed. If Formaldehyde is found useful against household pests it ought to come into general use. It is also most useful as a preservative, and fruit dipped in it and then dried can be kept for a long time. Milk and meat can also be preserved by it; but when used in other than the most minute quantities, it is injurious to the human system.

Formaldehyde is also an efficient fungicide, and although it cannot take the place of Bordeaux Mixture altogether, in many cases it can be used effectively, especially for seeds that may carry disease like scab in potatoes. Its only drawbacks are that its fumes are irritating to the eyes and nose when used in quantity.

HINTS TO SHOW COMMITTEES.

1. Branch Societies or Districts intending to hold Shows should try to give six months' notice, not only to the Agricultural Society (asking for a grant), but generally, so that intending exhibitors may have due time to prepare.

2. Preliminary posters numbering say, 100 to 200 or more, should be printed and posted up throughout all the districts which are immediately concerned in the Show,—and if it is a large Show which may attract exhibitors from all parts of the island, posters should be put up at all the Railway Stations; and the local correspondents of the newspapers should be asked to mention that the Show is to be held.

3. Four months before the Show actual work should begin. Advertisements should be put in the newspapers, and news paragraphs inserted. The Agricultural Instructors for the district and for the neighbouring districts should be asked to refer to the Show in their travels, and the various Branches in the district should also be advised that the Show is to be held, and their support asked. Posters should be sent them to be put up in suitable places. Circulars should be sent around to all who are thought to be interested i the Show, asking for snbscritions.

4. A draft of the Prize List should be sent to the Secretary o the Jamaica Agricultural Society for his suggestions and revision (if a grant is asked from the Society); and it should be printed an ready for issue four months before the Show,—at the very leas three months. The number of Prize Lists to be printed may ru from 200 for a small Show to 600 or over for a large Show. Abou one-third of these should be kept in reserve for the week of th Show, and 50 or so especially for the day of the Show, for the us of the Judges and various officers. The others should be poste judiciously to men whom it is considered may help the Show, eithe as exhibitors or subscribers, or both. Several copies, also, shoul be sent to the Agricultural Instructors throughout the island, an to the Secretaries of the various Branch Societies in districts cover ed by the Show.

5. Three months before the Show, more posters should be issued, making the wording as attractive as possible, and some of the coloured posters to be got in Kingston are certainly useful in attracting attention.

Two months before the Show all the printing should be got in hand :—(1) Triplicate tickets for Agricultural Products, 500 and upwards according to the expectations for exhibits. (2) Tickets of admission at the gate, and these are best printed in halves, so that one part can be worn and another part given up at the gate. The two parts may have printed on them the direction : "To be kept and produced if required ;" or, "To be worn in a conspicuous place" ;—and "To be given up at the gate," respectively. This is a good check against those who try to come in without tickets. All who attend Shows should note to wear the half of their entry ticket in a conspicuous place—either pinned on the button hole or stuck in the hat-band. This is a protection against dishonest people. Not less than 1,000 of these tickets should be printed for a small Show and 1,500 or 2,000 or more for large Shows. The other tickets necessary are for Riding Horses, Double Buggies, Single Buggies, Grand Stand, and a ticket at Half-price for children. (3) Prize Cards : these should not be too large ; the size of an ordinary envelope is large enough for Agricultural Products, and double that size for stock. The large tickets often used are unwieldy and take up too much room. The First Prize tickets should be coloured *red*, Second Prize, *blue*, Third Prize, *yellow*, and Highly Commended, *white*. It is not often, however, that Third Prizes are offered, so they are not often needed. Labels should be printed with the name and date of the Show, to be issued to those who enterstock when they send in their entries, these labels to be attached to the animal on the Show day—ordinary labels or tags do for this. The entries made should be carefully taken down in a pass-book, a page at least being left for each class. (See par. 10).

6. (a) At least a month before the Show, work should begin on the grounds to get them ready. The ring should be prepared early. It should be as level as possible so as to have the surface in good condition, and an oval shape is better than a circle, so as to provide a "straight" in the driving competitions. A circumference of 220 yards makes a large ring. Posts must be placed round the ring 10 or 12 feet apart, and thatch rope (which is very cheap) twisted round each post to encircle the whole ring.

If there is a Grand Stand it should be nicely draped with red, white, and blue cloth on the Show day, and if the Governor is opening the Show, a space should be railed off for him and his party, and good seats provided.

The Custos of the parish should always be asked to be a patron of the Show, and he with the President of the Show (if they are different individuals) should be asked to receive the Governor when he

arrives and conduct him on a tour of inspection of exhibits, before the Governor formally opens the Show.

Whoever opens the Show should have special attention paid to them; the President of the Show should in all cases arrange to do the honors.

A Show ground looks more attractive when plenty of flags are hung all about, especially at the gate, in the centre of the ring, and over the Stand. The Parent Society can usually lend Union Jacks for this purpose.

(b) The Inspector of the Police for the parish should be advised at least a fortnight before the Show, that constables will be required, and a suggestion of the number desired should be made. Arrangements should be made for providing the constables with lunch, and a drink—other than water; hot coffee is generally appreciated.

(c) Tenders for the rights of the bar and refreshment arrangements should be advertised for a month before the Show, and care should be taken that the prices for refreshments are fixed before any tender is accepted, otherwise some caterers may take advantage and make extortionate charges, to the great disgust of the public. Arrangements should also be made for providing the Judges and assistants with lunch at about 12 o'clock.

(d) The marquees which can be hired from the Agricultural Society, and which provide a shed 80 x 20, can be arranged for, or if not, this size will give an idea of what size of shed a large Show requires for Agricultural Products. If a shed is to be erected the roof should be made water-tight if possible. A double bench should run up the centre with a higher bench between. The benches to hold exhibits should not be more than two feet broad; if they are broader the space is wasted, as it is not desirable to place the exhibits bunched together in several rows. Not more than a single or double row is desirable; nor should the benches be too high; the raised bench in the middle is often so high that no one can see the exhibits, and reach them comfortably. The middle bench should not be any higher than say four feet, the outer benches from two feet six inches to three feet.

For ground provisions, however, a broader bench is required, and this should be specially provided, and if convenient it should be placed lower than the other benches to save the lifting of such heavy exhibits.

(e) As such articles as coconuts, pears, chochos, corn-cobs, oranges and grape fruit, roll about when exhibited loose, so that different exhibits get mixed easily, while it cannot be expected that exhibitors can bring separate wooden trays to show all such exhibits, the Committee should provide either square wooden frames (moveable) or large pudding pans to hold these, whichever is found cheaper.

For exhibiting cocoa, coffee, pimento, corn, peas and beans, castor oil seeds, and meals and starches, pudding pans, two-quart

size, should be provided in plenty (as they can be sold after the Show without much loss), with larger sizes to hold any larger quantities of exhibits asked for.

(f) For the Show day, pieces of string cut up in short lengths to tie exhibits together (such as some fruits or vegetables like oranges, turnips or carrots) or to tie tickets on exhibits; and also packets of small tacks to fix tickets on to exhibits like yams, oranges, coconuts, etc., should be provided. Lengths of bark rope should also be provided in case it is required to hang exhibits like bunches of bananas. If it can be done at all, bananas are better exhibited hanging up than lying on a bench, as they can be better seen and are safe from bruising. There should also be a knife and fork and two spoons provided for the judges of Bread, Butter and Preserves.

(g) Rosettes or neat pieces of ribbon, should also be furnished for the officials of the Show,—red for Judges, blue for Committee, white for Clerks, and red, white and blue for the President and Secretary. Thus those who are attending the Show and the policemen may know at once who are officials of the Show, and so have a right to give orders and handle exhibits.

7. Very careful arrangements should be made about checking the gate, so that there may be no carelessness or confusion or loss. The tickets given to the gate-keeper should be carefully checked before being handed to him, and he has to account for all these tickets. The effect of having the double ticket, one half to be worn, is that the gate-keeper can pass no one in free by favour, and there is a chance of dealing with trespassers, for without the ticket being worn, anyone is liable to be questioned and turned out.

8. There should also be provided two to four buckets to water stock, and if there is no water available on the grounds, barrels or casks should be provided and filled the day before the Show. A bucket, a quart pan, and scales for weighing milk are also required. Cut guinea grass or para grass should also be provided for feeding stock. Some Shows give this free, others charge so much a bundle; at any rate, it should be available. Small pans should also be provided to water poultry and dogs, and a boy should be specially engaged to water the small stock, while the member of the Committee who is looking after each section, should see that the stock in his charge are properly attended to. Special care should be taken to ensure that the milking of cows and goats entered for the milking competition, should be carried through as early as possible in the morning, otherwise the animals will suffer.

9. Members of the Committee and other helpers should be detailed to take charge of certain work on the day of the Show. One should be ring master, to arrange for the stock being brought into the ring and arrange the animals before the Judges; then there should be a timekeeper with a megaphone or bell to give notice of next event; there should also be a person in charge of each section of the cattle, horses, and small stock, and another for poultry and dogs. The duty of these is to see that the stock are put in their proper places

for judging, else exhibitors coming in, put their stock anywhere that seems to them convenient at the moment, so that when the Judges come along they will probably miss some of the stock, and have considerable difficnlty in judging those they find, while the public cannot compare exhibits one with another.

10. The day before the Show, small tickets or tags should be fixedon all the pens where cattle, horses, pigs, sheep, goats and fowls are to be put, with the numbers of the exhibits, so that exhibitors coming in simply need to look at their labels and see the corresponding labels on the pens allotted to them. Clerks must also be provided to go round with the Judges. The books for the Judges should also be written up with the various classes they are to judge written in, so that all the Judge needs to do is to put the number of the Prize winner and the number of his exhibit in the book. These books should be taken immediately the judging is finished to the Secretary's office by the clerks.

There should always be a little place set apart for the office of the Secretary, where he can keep his books and papers and where he may be referred to during the Show.

11. The Agricultural Products section usually gives most trouble on a Show day as the entries have to be received and recorded and tickets issued during two or three hours in the early morning. Shows open at six for exhibits, but exhibitors do not usually turn up till about seven, and entries close at nine, so that judging may begin at ten. Thus there is usually a rush. Plenty of intelligent help is therefore required.

The triplicate tickets are very simple and very effective; they are in books of 100 consecutively numbered, and each ticket has three parts,—the first and second parts being filled in with the name, and address of the exhibitor, the class and name of the exhibit; the number of the exhibit; and the third part only with the number and class of the exhibit; the nnmber of the exhibit is the printed number on the ticket. The first part is kept by the Secretary in the book, the second part is kept by the exhibitor, and the third part the exhibitor attaches to the exhibit. There is thus no name on the exhibits, only a number, and the Judges therefore, do not know the names of the exhibitors at all, only the Secretary has the record of them.

These books being in hundreds, can be sent out to responsible agents in different districts to take entries of Agricultural Products before the Show day, and if entries are only taken correctly, much time is saved on the morning of the Show.

12. The exhibits of vegetables, fruits, grains, preserves, and handicrafts have all places allotted to them, and exhibitors should ask where these places are, and put their exhibits there, and not put them down anywhere. Then these exhibits have all to be arranged for the judging, every class having to be arranged carefully by itself; great care has to be exercised that the different classes are not mixed up, so that they may not be missed in the judging and so cause confusion.

A sufficient number of intelligent helpers should be allotted to this work : if they have previous experience of such work so much the better. The Secretary of the parent Society and the Agricultural Instructors must not be expected to take all this on their hands, as they are expected to explain to exhibitors where they failed in their exhibits and generally to take advantage of the occasion to give what instruction they can.

Then when the Show closes, help should attend in the Agricultural Products section to assist exhibitors in claiming their exhibits by reference to the numbers. Much confusion and irritation nearly always results by exhibitors being left to themselves to do this as they cannot easily find their own exhibits without assistance.

13. The Judges should be asked to come to the Secretary's office at a certain time and get their books. A clerk should be provided for each group of Judges to enter the awards in the pass books, and write out the Prize Cards. Clerks should note to be careful to put the correct number on the exhibit tickets in the Judges' books and on the Prize Cards, and to fix the cards on the exhibit so that they cannot be blown away. String and tacks should be provided for this purpose.

14. It would assist to make Shows of more effect, if soon after the Show the various Judges were asked to write a short report on the class of exhibits they judged. In this case they should be advised when asked to judge that this is expected of them.—Jno. Barclay, Secretary Jamaica Agricultural Society.

EAST INDIAN LABOUR.

Plantations, especially banana plantations, where fruit is cut to be delivered by a certain hour on a certain day each week, must have a certain supply of labour available at any time. If they have not this, their field operations will suffer, the trade of the country will suffer, our exports will be less, planters will not invest capital, land will not be put under cultivation ; those labourers who have their own lands in the neighbourhood of large plantations and who often find work on them besides working their own lands, will not get this labour to fill up their odd time. If planting operations on a large scale are not reasonably furthered by the country, labourers will suffer from the withdrawal of capital ; so will tradesmen, and so will the penkeeping industry which supplies the mules and the cattle ; so will the occupiers of rented land who cultivate provisions—as there will be fewer workers to buy.

It is a mistake for anyone to think, as those ignorant of the subject often talk, that East Indian labour is cheap. It is really expensive labour, and troublesome labour ; it is subject to so many restrictions, while the kind of coolie that is brought to the country now is not one, evidently, that has been accustomed to field labour, and it takes months to break him into the work. But the value of

East Indian labour is that the "coolies" live in barracks, subject to discipline, and are available every day for so many hours a day. It is dependable labour.

Jamaica is largely a land of small settlers; it is easy to own land, and the great desire of almost everyone is to own his own homestead and cultivate his own piece of ground. The settler grows the same crops as the big planter, but *with food crops in addition.* In the banana districts the small cultivator always has bananas, so it comes about that just when the plantations have most work to do, that is just the time when the small settler growing the same crops, also has his own operations to attend to. When he is through with his own heavy field work and his family can keep it going and he wants work outside, that is just the time when there is least field work on the plantations generally speaking, and although some labour always has to be employed on the estates besides East Indian labour, that labour is least required when it is most available. Thus it comes about sometimes that there is an unreasonably loud cry of want of work even in banana parishes just because estates will not take labour that wants to work on them just when it thinks fit.

Large estates employ just as little East Indian labour as will pull them through work requiring promptitude in the busy times of the year; if local labour were available then they would gladly dispense with coolies as expensive and troublesome.

It is not true that there is a surplus of labour for plantations, the reverse is the case. Taking St. Thomas-in-the-East for instance, there is and has been a scarcity of local labour for years. Reports show that the local labourer is often independent and only works when it pleases him. It is difficult to get labourers there who will begin at 7 a.m. and work till 5 p.m., from Monday till Friday evening. They come out on a Tuesday and look at the tasks, work Wednesday and Thursday, and don't come back that week.

We will take another parish at the other end of the island from St. Thomas, Westmoreland where there has been a great development in cane farming and there is absolutely not enough local labour in the parish at the present time to carry on the cultivation of cane as it could be and as owners would like it to be carried out. Where crops are not weeded exactly at the proper time they suffer, and the yield suffers.

At one time in Trelawny sugar estates could turn away labourers in scores on a Monday morning who came seeking work, now between men cultivating more for themselves, and the attractions of Panama and Costa Rica, there is hardly enough labour available when it is most wanted.

Unless labour here is subject to discipline the same as in other countries, where there are industrial and agricultural occupations, there is an end to enterprise, and plantations and lands instead of being developed will just be cultivated so far as the owner can scrape along with a minimum of labour.

It is not true either that wages are low ; the labourer almost invariably, except perhaps in some sugar districts, has either his own plot of land or he rents land and raises a large proportion of his own food. In some districts (a parish quoted above for instance) he only works for estates when he wants a little ready cash to spend. In some districts it is different, and a man working steadily from 7 o'clock till 5, from Monday till Saturday, can make a great deal more at task work than 1/3 a day. In St. Mary and Portland they can make 2/- per day. We have studied the subject of labour and we have studied the subject of the price of labour, and what is got for it—that is its commercial value—very closely. We have had a good deal of experience, and we will say this :—That there are some forms of work in which Jamaica labour is cheap, but in anything requiring particular care and precision it is usually dear. Unskilled labour is *generally* cheap anywhere ; skilled labour is usually appreciated at its value, and employers are glad to get it.

Those who write about the labour of the colony and express grievance at East Indian labour being imported and employed, are usually men who are not engaged in agriculture, who probably never employ labourers, and are therefore simply not in a position to give advice. Moreover, they are usually townsmen.

There is always a cry for more capital and more enterprise and more agricultural undertakings, more development of waste lands to make them productive, and there are men who work and have worked unceasingly, with very little thought of personal aggrandisement to bring capital into the island, who work hard and persistently for the commercial and industrial advancement of the colony, and whose work has been practical and well-founded in every detail. But unless capital can be made reasonably sure of a reliable supply of labour, or of facilities for securing labour, there will be no development. On the other hand there are those who talk, and in a familiar phrase—"talk to the gallery" all the time,—talk that catches the unthinking and the discontented and the lazy who want everything made easy for them ; whose contentions are not well founded and whose ideas are not calculated to advance the welfare and best interests of the island at large.

TOMATOES.

Tomatoes may be and are easily grown, if the desire is only to produce tomatoes ; but if the ambition is to produce as large a number of fine marketable fruit, so that to see them will simply *make* people buy them, then it is not so easy to do this, and close attention to weather conditions when planting, transplanting and growing are required, besides close attention to the preparation and after cultivation of the soil.

Make your nursery ground just as rich as your field will be. If you set the seed in soil made excessively rich, the plants will get

a set-back when transplanted into the poor soil. On a small scale, set the seed in soap boxes; on a large scale in beds close to the piece you are going to grow the plants on, so that they will not require to be carried far.

Fork up your ground for the nursery deeply and turn in all the vegetation you can, and add manure if you have it. Then make your beds six to eight inches above the walks between and about five feet wide, spread some wood ash over them, and then rake the surface fine.

In planting the seed use a board 10 inches wide, straight on both edges. Place this on the seed bed, and standing upon it, draw a furrow along each edge; this can be done with the back of the rake held short. Sow the seed thinly in the two rows made, cover over, and, shifting the board two inches or so, firm the earth down over the sown seed by standing on the board.

You have thus two rows of seed 10 inches apart. This is sufficient width in the nursery. Repeat till the bed is finished. Then if the ground is not moist enough, or the weather is dry, wet the seed bed thoroughly, and cover over with fine trash, grass, rotten wood or light soil, not lumpy. In four or five days the little plants appear. Keep the plants moist, and if cut worms or caterpillars appear, treat them with a dose of the powders advertised in this JOURNAL.

The field should be got ready well ahead of the planting to get the soil as fine as possible. A crop of cowpeas or velvet beans planted four months or so before, on the piece of land intended for the tomatoes, and turned in a month ahead of planting, largely takes the place of animal manure. But to give the plants a good start, if there is not enough manure to cover a field, then go on to the pasture and gather all the cow dung you can get, break up the dry clods as fine as you can and put in a box. When the young plants are six inches high and have made six leaves, transplant to the field. If the weather is dry get a bucket or basin and make a puddle of earth and water, that is—mud—ease up the young plants and dip the roots in the mud. Carry to the field and with a dibble or trowel make a hole, put in a small handful of the pulverised cow dung mixed with the earth and drop the plants in—cover all the roots. Draw the soil on and firm well, and draw more loose earth over the firmed soil. Plant two feet apart in the row and three feet between. Transplant in the late afternoon if possible and if not, cut little branches or strong weeds, and stick one against each young plant for temporary shade. By this method the plants go right on and in two days can be observed growing. Rake between the plants and after the first shower mulch heavily, and little after cultivation is needed.

To get specially large and fine fruit, the plants require pruning by picking off the flowering shoots that too early grow out from the axils or joints of the leaves, so strengthening the plants and forcing them to bear at the top.

BIRDS.

Many people in Jamaica fancy that the increase in population, also area under cultivation, caused birds to decrease ; that is quite a mistake. The population in England has increased greatly during the last twenty years. Probably no country in the world has so many birds to the square mile. The increase of sparrows, starlings, wood pigeons, etc., has been enormous. Pigeons are so numerous, that a gentleman shot five hundred to his own gun in one day. Close time has caused blackbirds and bullfinches to increase to an enormous extent. The only bird that is increasing in Jamaica at a moderate rate is the "Canary." It has now reached Green River near Green Island. Small boys destroy every bird's nest they can reach. Cowboys on estates are particularly partial to boiled nightingales' eggs. Gold finches may eat some yam sprouts, but they are only found in certain localities. Rats eat many young birds. Baldpates and ringtails have been shot out. Jamaica has been well described as a birdless country. Cuba has more birds, but can be described, compared to England, as a birdless island. Some people shoot every owl they see, why I do not know.—Taylor-Domville.

[John Crows are becoming more and more addicted to eating young birds, robbing the nests of blackbirds and nightingales especially. These birds (John Crows) have not the carrion to feed upon they used to find and so are changing their habits to suit.—Ed.]

BROOMS.

We import brooms into this island, and brooms very deficient for their purpose are also made from the thatch palm in St. Elizabeth. But the plant from which the best brooms are made called Broom Corn, can be grown here in dry districts as easily as guinea corn ; the plant is, in fact, a variety of Sorghum, the same family as guinea corn. We have been advertising seed to introduce the growing of the plant, but few people have troubled to try it, yet the making of brooms would make a splendid home industry in South Manchester and St. Elizabeth, where the plant should grow well. We have had plants growing well in the office back-yard.

To learn to make brushes is not difficult at all. The time to cut the head is when the plants are in blossom and the seed is beginning to set. The process the heads go through generally is simple, but of course needs care. As a rule, the farmers who grow it do not make the brushes, but pack the heads into bales which are sent into the markets, and made into brooms with the aid of machinery, but the making is not difficult to do by hand and is less tedious than making hats. Thrifty farmers in the districts where the broom corn is grown, while they sell the bulk of their product, never buy brushes for their own use, but make them at home.

We have still a small quantity of seed in hand and if enough readers want to try to grow the plant we can easily get more seed

SEASONABLE HINTS.

Glorious seasons still continued through October and into November up to Saturday, 6th, when it rained heavily, and in some parts also, the wind blew to a gale. Up to this date the weather suited growing crops, but for crops reaped or ready to reap the rain had been too continuous, with not enough sunshine to enable late pimento to be dried, coffee to be picked and cured and sugarcane to sweeten. While there had been a steady rainfall in every district, the quantity of course varied much. A heavy rainfall on the light soils and on red soils, is not felt so much as on the heavier black soils which have now become too clammy, so that bananas are apt to be chilled and get a set-back.

From Saturday the 6th, it rained and rained until every water-course was flooded and overflowing, resulting in damage more or less great to cultivations, roads, bridges and even the Railway. Many very serious landslips occurred and in some parts the hills are scarred with them.

All crops have suffered but especially bananas and the ripening coffee, but with fine weather following, the damage will be largely compensated for by quick growth, good ripening and curing weather. When the rains stop trenches should be cleared out forthwith and the cleanings spread through the cultivation, not heaped up at the side to be washed back again with the first rain nor worst of all, heaped up around any growing tree like coffee, cocoa or rubber, except bananas, which when the roots stand out of the soil may have this dirt put round them. Then cowpeas can be planted in cultivations where there is an open space, and if they can be secured, Jerusalem peas, which are just coming into favour, can be planted even in shade. This pea it is found, will grow under shade and will likely prove to be the useful legume which we have been looking for. Irish potatoes and all vegetables can now be planted. Lands can be made ready for bananas, and whenever ready, peas planted thickly through even before the suckers are put in.

In dry districts subject to droughts, mulching should now be done when the ground is soft and moist in order to conserve moisture ; a mulching always pays as the soil is kept cool and damp, weeds are kept down, and as the mulch gradually rots it becomes manure to the soil. A mulch saves two, perhaps three weedings, makes a crop safe against drought, and if there is rain, is still manure and helps to make a larger crop.

Corn will be plentiful, and those who have a good crop should first estimate what their own wants will be during the next nine months, and store enough for that period before they sell any. If it is dried thoroughly as it should be, corn will keep well and not be subject to attacks of weevils. When large quantities are stored, a stock of Bi-sulphide of Carbon should be laid in (to be got from the Government Laboratory at 5d. per lb. in 10lb. tins). This is a very inflammable stuff and must be used carefully. For the next planting of corn, pick out the best cobs ; it is best if this is done in the field,

that is, those vigorous cornstalks, carrying two good cobs should be selected and marked, and when the cobs are full and ripe they should be broken, kept separate, carefully dried and the cobs kept to furnish seed.

We have good seed potatoes, black eye peas, cowpeas, seed corn and vegetable seeds in stock for sale now.

STOCK NOTES.

Colds in Horses.—At this time of the year when the days are hot and the nights often chilly with the strong north breeze blowing, horses, especially those with the long hair that always grows at this time of the year, often develop colds. They cough a good deal and have a running of phlegm at the nostrils. It is better to keep horses clipped.

The treatment should be prompt. Wash out the nostrils with jeyes and water (one teaspoonful to the quart of water), dab some of Benjamin's Jamaican Healing Oil into the nostrils, bathe the throat with hot water, and rub Elliman's Embrocation hard all down the throat (the under side of the neck), beginning from underneath the chin. Do this every day and administer a tablespoonful of Benjamin's Jamaican Healing Oil daily internally until the cough stops.

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Horses.—One of the most noted stock breeders of high-priced horses in the world says, that while the rules for breeding horses are identical with those of cattle-breeding, he considers the influence of the dam is almost greater in the case of horse-breeding than in the case of cattle. He is particularly careful in the selection of his brood mares. One of his mares is still in splendid bloom at the advanced age of 20 years, and is as useful as ever. Soundness of limb and constitution are the special characteristics he lays stress on.

We here seem to breed from the other point of view, that it does not matter particularly about the mare, and so expect a first-class stallion to do everything in regenerating progeny.

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Worms in Small Stock.—Calves, sheep and goats suffering from Strongylus in air passages, to any extent, generally have them in the intestinal tract—therefore give the following:—For six months' old calf, half an ounce turpentine, lambs of same age, one drachm turpentine in 8 times as much milk. Give by the mouth. Two or three doses at intervals of two or three days, generally effect a cure. To effectually keep the parasite away, give the following once daily for 10 days:—Common Salt, 3lbs.; Powdered Sulphate of Iron, 1lb.; Powdered Gentian, ½lb.; Powdered Ginger, ½lb. Small teaspoonful for sheep, two teaspoonfuls for calves, in four and eight ounces of water respectively.

Intratracheal Injection to Destroy the Worms in the Lungs.—Make a small incision with the small blade of a penknife through the skin—half-way down the neck—between the rings of the windpipe, so as to admit the point of the smallest glass syringe

obtainable into the tube, and inject the following:—Turpentine, 1½ drachms; Carbolic Acid, half drachm; Chloroform, half drachm; Glycerine, half drachm.

No serious irritation results—a few paroxysms of coughing usually occur. Brought into actual contact with the parasites, this vermicide promptly destroys them.

The above dose is for calves and sheep. Lambs take from one-third to half of this dose according to size and age.—E. Tavares & Son, Veterinary Surgeons, 115 Tower Street, Kingston.

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Lip and Leg Disease.—An infectious disease in sheep, attacking the lips and legs, has broken out in the States of Wyoming and Utah, U.S.A. This disease is caused by a germ called *Necrosis Bacillus*, and is marked by an ulcerated condition of the legs, muzzles and lips; but other parts may be likewise affected.

Sheds, pens and pastures become infected with the germs, which enter the tissues when the mouth or leg is injured by rough or prickly forage, etc., and set up disease.

The treatment of the disease is satisfactory, if taken in time and applied energetically.

The first step is to separate the sheep attacked. The treatment is by strong antiseptics derived from Coal Tar, like Jeyes.

This disease is practically a new one. At any rate, it has never been observed closely before, and has not been common.

COMMENTS.

Postage.—Correspondents again please note that letters TO this office are NOT free of postage, only our outgoing letters are free.

The omission to affix stamps on the envelopes causes us to pay double postage.

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Fencing.—It should be every cultivator's ambition to have his land thoroughly fenced. It adds greatly to the value of the place and helps materially towards the peace and comfort of the neighbourhood, as there is less quarrelling over stock trespassing and causing damage.

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Potatoes.—We have imported Irish Potatoes of several varieties, "Early Rose," a red potato, and "Green Mountain," a white potato, from Nova Scotia. These are sold at 14/- per barrel. We have also seed imported from England, "Ninety-fold" variety, which we supply in small quantities to suit those enquirers who can not take a whole barrel. A kerosene box holds 50lbs., supplied at 2d. per lb. and freight.

Public Holidays.—The Governor has proclaimed that Monday, 27th December, will be observed as a public holiday in lieu of Sunday, 26th. Saturday, 1st January, 1910, will be observed as New Year's Day.

Appleton Show is to be held on Monday, 27th December, Porus Show on Thursday, 30th December, and Darliston Show in Westmoreland, will be held on Saturday, 1st January. We shall spend a busy week attending all of these.

Hector's River (Portland) Show will be held on 23rd December.

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Alfalfa.—We have Alfalfa (or Lucerne) seed from California on hand at 6d. per lb. If proper care is taken this valuable forage plant can be raised here; at any rate it would be so valuable to stock-keepers that those in dry districts should experiment with a bed of it to try how it will do.

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Prize Holdings Competition.—The judging of the Prize Holdings Competition for St. Catherine, should commence on Wednesday, 1st December, and continue till about the 17th, but will be postponed to January on account of the damage to cultivations and roads by the rains.

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Shows.—The Show fixed to be held at Malvern on 9th November, could not be held on account of the storm of rain; it has now been fixed to be held on 25th November. Old entries will hold good; new entries will be taken mean time.

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Loss of Stock.—The long-continued heavy rains have been responsible for much loss among all kinds of stock, but especially those kept by small settlers and tied out. The loss among donkeys and goats has been very great. On one rented property we know where there are probably not more than 50 tenants, 13 donkeys were lost and nearly all the goats. In another small district in the space of a few miles, we have heard of 16 donkeys and four mules being killed by the weather. We are afraid that in most cases for two or three days, tied out stock were cruelly left to take care of themselves and unable to move for shelter or get a bite, succumbed. Care of their dumb animals was on the other hand, some people's first thought and care amid all the wild weather. On large properties we have heard of sheep, cows, donkeys, mules and horses being lost too, not so much by flood as by exposure. It is necessary, therefore, to handle all stock carefully now so that they may pick up as quickly as possible. The administration of a tonic either in a liquid form or as a powder or as a ball, we have found, helps the

animals to overcome their weakness. Where people do not know exactly how to make up these tonics, they should write Messrs. Tavares, Veterinary Surgeons, Kingston, who advertise in this JOURNAL and are prepared to send out whatever is required, and give veterinary advice for a small fee. We can answer for Messrs. Tavares' preparations and for their skill as Veterinary Surgeons.

Messrs. Day, Sons & Hewitt's veterinary preparations, also advertised in this JOURNAL, are well known as most useful and effective in the same connection.

BRANCH NOTES.

Claremont (St. Ann).—The usual quarterly meeting of the Council of the St. Ann's Agricultural Society was held at Claremont on the 20th October, 1909, at 3.30 p.m. There were present: J. E. L. Cox, Esq., President, in the chair, Hon. H. E. Cox, Colonel E. Moulton-Barrett, Messrs. St. Leger Tivy, John Flynn and the Secretary, Dr. Ffrench-Mullen. The minutes of the last meeting were read and confirmed. Three new members were added to the Society. A letter was read from Mr. G. Percy Fonseca, Secretary of the Spanish Town Branch, asking the co-operation of this Society in a resolution to the parent Society to approach the Government with a view of having the Pound Law so amended as to admit of the same protection being afforded goats found trespassing, as it the case of sheep. that is, that goats be impounded instead of being shot and killed, as is at present sanctioned by law. and on the score of protecting such animals against unnecessary cruelty as well as their owners against loss. After discussing the subject the Council directed the Secretary in reply to say that: This Council regrets its inability to favour the resolution owing to the difference of circumstances in this parish. A letter was read from Mr. E. A. M. Tulloch of St. Ann's Bay, asking that this Society do call upon the parent Society to do something for the products of the Island, referring to the oranges which have had no market. In that the Secretary was directed to reply as follows: That this Council could take no steps in bringing about the issue sought unless Mr. Tulloch would make some suggestions as to the way of remedying the evil. The subject of appointing persons to act under Section 2 of Law 4 of 1909, was then brought up for discussion, after which the Secretary was asked to get from influential persons the names of such persons as they think fit and proper to act under this law. As soon as a list could be got up, a special meeting would be called to deal fully with this subject, after which those names would be submitted to the Governor. The annual general meeting of the Society which should have been held immediately after the Council meeting, had to be postponed to a date to be fixed by the President, there not being as many members present to form a quorum, owing to the inclemency of the weather.—DR. V. FFRENCH-MULLEN. Secretary.

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Upper Metcalfe (St. Mary).—In accordance with his promise, Mr. Cradwick visited this district on the 21st October, 1909, his object being to help and direct us in our conflict with the various cocoa diseases that threaten the ruin of our fruitful district. Thousands of trees are in the various stages of the canker disease in different places, and there is not an acre in which "Pod Rot" is not working havoc. The weather was very unpleasant, heavy showers having been falling almost continuously for the whole week, and the roads being in a deplorable condition. Neither Mr. Cradwick nor Mr. P. W. Murray, Inspector of School Gardens, who was on a visit to the Brainerd School Garden, seemed, however, afraid to do their duty even under such unfavourable circumstances.

A tremendous land-slip blocked the road within a half-mile of Brainerd, but our good road headman was soon at work with a gang of willing men all eager to have the way cleared in time for the visitors to pass in safety. At 2.30 p.m., the buggies were able to get over a temporary mound of earth, wood and stones several feet high. Both gentlemen, along with Mr. S. A. Schliefer, the teacher of the Brainerd School, visited the School Garden and after some deliberation, it was decided to postpone our meeting with the Upper Metcalfe Branch of the Agricultural Society until next afternoon at 3 p.m. Mr. Murray started on his return journey for Kingston and Mr. Cradwick proceeded with Mr. S. A. Schleifer to his home at Deeside Farm, to investigate and treat the cocoa diseases above referred to. On Friday morning Mr. Cradwick started work at an early hour accompanied by Rev. C. Hastings of Mount Industry, in St. Catherine, and Messrs W. Schleifer, A. Allen, W. Hyde, A. Smith, A. Salmon, S. Schleifer, and a few others. Several trees were treated and we reluctantly withdrew from the unfinished task when a heavy shower of rain came down. At 3 p.m. we returned to the Brainerd Schoolroom, carrying with us two diseased cocoa trees and a few diseased cocoa pods. In spite of the inclemency of the weather, about sixty members gathered to hear the lecture. The Rev. T. H. Grant called the meeting to order and asked Mr. S. A. Schleifer, the Secretary, to make a statement of the progress and present position of this Branch Society. The Secretary explained that the Society started on the 27th May last and now already had over seventy members, but that up to the present, we had not yet filled permanently the positions of President and Vice-president, our aim being to get in the most capable men in our surroundings before making the appointments. The time was now come, however, and it was proposed to perform the duty forthwith. Mr. C. Abrahams was then elected President and Mr. A. Northover and the Ministers of Brainerd and Lucky Hill, were elected Vice-presidents. Mr. Abrahams having taken the chair, called upon Mr. Cradwick to address the meeting, and to a deeply interested audience, he dealt with his subject in his usual masterly manner, illustrating with practical demonstrations as he proceeded. Those already alive to their interests, retired the more determined to fight the diseases, while others were alarmed, not having before viewed the matter in so serious a light. Others did not attend the lecture because they had made up their minds to plant a new tree wherever an old one died and were not prepared to take much trouble to save the present trees. The lecture having closed, Mr. A. Northover, planter of Lewisburgh, in the parish of St. Mary, and Glengoffe, in the parish of St. Catherine, moved the following resolution, which having voiced the sentiments of all present, the Secretary was advised to speedily forward to the Hon. Director of Agriculture :—"Resolved that in view of the fact that thousands of cocoa trees are now dying from canker in the districts covered by this Branch of the Agricultural Society, and in the adjoining districts in the parish of St. Catherine and that nearly the whole crop of cocoa is threatened with ruin from "Pod Rot," the Hon. Director of Agriculture be respectfully requested to supply materials for establishing and maintaining three demonstration plots in cocoa plantations in the various parts of the districts as may be recommended by this Society, and that demonstrations be carried on either by Mr. Cradwick or by an assistant under his immediate directorship, until at least the people are sufficiently educated to be able to cope with the diseases themselves." A vote of thanks to Mr. Cradwick was passed and the meeting adjourned, all wishing for another meeting early. Mr. Cradwick proceeded to Lewisburgh to inspect the cultivation of Mr. C. Abrahams.—SAMUEL A. SCHLEIFER, Secretary.

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Santa Cruz (St. Elizabeth).—The regular bi-monthly meeting of this Branch was held on Thursday, the 30th September, 1909, at 5 p.m. Owing to the poor attendance on the 16th September, due probably to the in-

clemency of the weather, no meeting was held on that date. There were present : Messrs. C. P. Jackson, President, in the chair ; H. W. Miller, Assistant Secretary, C. A. Robinson, E. Thompson, T. W. Darien, W Hitchinson, D. McLean, D. Wilson and S. Aug. Blythe, Secretary. After the reading and confirmation of the minutes, a communication from the office of the parent Society, dealing with an Orange Rinder, was read and discussed. The machine was left with the Treasurer for members to inspect with a view to encourage the extraction of the Essential Oil from oranges, which then promised to be a very remunerative industry. The Secretary was instructed to communicate with the office and with Mr Palache on the matter, and show that the machine was left as stated and not with the understanding that it was to be charged. In the absence o the Travelling Instructor, Mr. H. W. Miller, Assistant Secretary, read a very interesting paper on the "Formation of Soils." Too much canno be said in favour of this paper. The members could not but freely express their appreciation of it. A vote of thanks was accordingly moved by the President and seconded by the Secretary. It is a matter sadly to be regretted that so few members attend these meetings from time to time. It is to be hoped that better interest will be shown at future meetings, as it is definitely arranged to have similar papers read by member at each meeting when possible. These papers will, to a large extent, consist of the members' own practical experience, and will I trust, call for greater share of attention from all true agriculturists. In line with this there is a hope of starting an experimental plot in connection with th Society as soon as an opportunity offers itself. These, with other inducements, the officers hope will bring this Society more in a line with th wish of the members. The next paper will be on the "Management c the Soil," "Tillage, with special reference to local Soil." All intereste in the subject are cordially invited to attend the next meeting of the Society, which will be held in Santa Cruz on Thursday, 18th November, a 4.30 p.m.—S. A. BLYTHE, Secretary.

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Frankfield (Clarendon).—The regular monthly meeting of this Branc was held in the Frankfield Schoolroom on the 2nd September, 1909. Ther were present : Messrs. G. W. Downie, G. S. Cohen, J. T. Edwards, J. T Spencer, P. J. Dyke, F. Fearon, J. A. Beckford, and J. Hirst, Esq., Agricultural Instructor. Messrs. James Dyke and George Taylor becam new members. In the absence of the President and Vice-presidents, th local Instructor was nominated to the chair. The Secretary having reported that the minutes of the preceding meeting being mislaid, th Chairman asked that they, with the present ones, be read at the nex meeting. This was approved. The Chairman addressed the meeting a length. He pointed out the use of Branch Societies, gave the history c the Jamaica Agricultural Society—telling why it was formed, and ho Branch Societies came about, pointed out the use of Instructors to cultivators, and lastly gave encouraging remarks to the members present t do their level best to secure improved fields. The Secretary explaine that he is in possession of six booklets bearing on the subject of agricu ture, which he had received, issued by the German Kali Works, Havana Cuba. The Chairman suggested that Mr. Barclay be written to, so tha we may be put in communication to get more of these valuable agricultural literature for distribution among the members. The matter of th proposed Branch Railway extension came up for free discussion, and th Chairman intimated that we can make our grievance known to the Government by petitions and resolutions. The Rev. Mr. Phillips, who can in about half an hour after the meeting began, pointed out that to h knowledge, no formal resolution was moved in the Parochial Board di favouring the proposed Railway Extension to Chapelton, and he wa astonished to see an article in a newspaper purporting that a resolutic was passed against the Railway to these parts. The Chairman move

and Mr. G. W. Downie seconded, that a special meeting be held here on October 19th *re* Railway Extension to Chapelton. It was the verdict of the meeting that the Secretary should write to the Smithville and Park Hall Branches asking them to do the same. Upon request the Instructor told Mr. G. Cohen how to improve a bit of land consisting of yellow, wet and stiff clay. The method is thorough forking and thorough drainage, and the months of September and October are the best time for doing such, so as to expose the subsoil to the action of the sun and rain. Mr. Downie moved and Mr. Cohen seconded, a vote of thanks to the Instructor for his presence with us and his valuable instructions. The Rev. Mr. Phillips spoke in favour of the resolution. Mr. Hirst replied in suitable terms. The next regular meeting was fixed for the 29th October, at 12 noon.—JAMES A. BECKFORD, Secretary.

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Metcalfe (St. Mary).—The monthly meeting of this Branch was held at the Job's Hill Schoolroom on September 17th, 1909. Mr. Jas. Kelly, Vice-president, in the chair. Members present were: Messrs. Maurice Hart, John Edgar Hogg, Sydney Norman, Amos Yewell, S. Clarke Scott, Daniel Kelly, Edward Campbell, R. B. Ritchie, Chas. Officer and George Hamilton. Mr. William Norman was a visitor. J. Briscoe, Esq., Agricultural Instructor, was also present. The minutes were read and confirmed. The Secretary expressed his regret for the joint accident of the two brothers, Mr. Ellis Hart (President) and Mr. Chas. Hart (ex-Treasurer) in the fracture of their collar bones, by falling each from his horse when they came in collision with each other. The business of the meeting was entered upon. The Secretary appealed to the members of the Society to try their best and keep up their Society's interest. There is great necessity for those who have some intelligence to be present to show up the importance of agriculture and not to discourage the ignorant ones in any way. Mr. Briscoe gave as usual, a fine address on the possibilities of good cultivation. He also pointed out the difficulty of getting up a Show here. Cassava was taken up as a subject. It was pointed out by the members where it will not be a payable concern to plant it for 1/- per cwt.; 1/6 may be a more acceptable, yet scarcely a profitable, price. A few members were anxious to improve the breed of fowls and applied for eggs. The Secretary offered his tenantry of a quarter acre at Pembroke Park, as an experiment ground to the Agricultural Society, if the members will take advantage of it.—S. C. SCOTT, Secretary.

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St. Faith's (St. Catherine).—This Branch met in the St. Mary's Schoolroom on Thursday, 14th October. Present: Messrs. Alex. Carey (presiding), J. Briscoe (Travelling Instructor), W. L. F. Vassall (Assistant Secretary), and a large number of other members. The minutes of the last meeting were read and confirmed. The chief matter dealt with was the report of the Show Committee, which showed that the Committee had held two meetings. Mr. Alex. Carey had been elected President, and Mr. W. L. F. Vassall Secretary. The President, Secretary and several other gentlemen were authorised to solicit subscriptions, and the Secretary was instructed to write to a number of gentlemen asking for donations. A prize list had been drawn up, and was read to the meeting. Other arrangements being made for the Show, were also reported. The meeting was highly satisfied with the work of the Committee, and decided that the Prize Lists should be printed and issued as early as possible. A few other matters of local importance were dealt with. Mr. Briscoe addressed the meeting, urging interest in the Show and the Prize Holdings Competition. The President and Secretary also spoke and the meeting adjourned. The next meeting will take place at Grateful Hill on Thursday, Nov. 11th at 3 p.m. There have been unprecedented showers of rain, but the last week has been fair. Cultivations are looking well.

Coffee and cocoa are coming in, and the crops promise to be fair. Much local interest in the Agricultural Show is being aroused.—W. L. F. VASSALL, Acting Secretary.

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Pedro (St. Ann).—This Branch held its regular fortnightly meeting on Thursday night, 21st October, at its usual rendezvous. It was a very enjoyable and interesting meeting, and brought satisfaction to every one. Meeting began with song entitled "Midnight Serenade," after which the President, who occupied the chair, offered prayer, and then gave his opening address. There was quite a large attendance of members, as well as visitors, and everyone displayed a keen and lively interest in the various items on the agenda. The minutes of the last meeting were read by the Secretary and confirmed, after which Mr. H. H. Nembard, having paid in his subscription, was enrolled as a member and cordially received by the President. At this stage, we were treated to a very interesting reading entitled "The Three Sisters with Glass Hearts," by Miss T. J. Fletcher. Everyone was delighted with the reading and a hearty vote of thanks was awarded her. After this reading, the President's alacrity compelled him to treat us to a song entitled "Forget Me Not." He received applause, and a hearty vote of thanks was proposed, seconded and carried for him. The paper on "Manure" written by Mr. Gohagen, was then read by Miss J. Beckford, as the writer could not possibly attend. A hearty vote of thanks was also accorded to both writer and reader of this valuable paper. Next followed the Recitation entitled "King Bruce," nicely rendered by Miss A. Gohagen. Applause was raised at the end of this recitation for the reciter. The next item on the agenda was a song entitled "Laugh and Grow Fat." There is no gainsaying the fact that this song was rendered by members with marked *esprit de corps*. After the singing of this song, the debate on the "Proposed Motor Car Service *vs.* the Present Mode of Conveyance," came up for hearing. Rapt attention was paid to the discourses of the two supporters. Mr. Grant, supporter of the present mode of conveyance, began in graphic style to demonstrate the merits and superiority of the present mode, over any other system of conveyance, and made expostulations on the following points: (1) The present mode of conveyance is capable of reaching nearly *every* and *any* place in the Island. (2) It has been the means of subsistence for nearly all classes of people throughout the Island. (3) People who can't afford to own a cart, buggy, or mules, etc., resort to the planting of corn and grass. Hence a living is earned by selling these products to the owners of live stock, etc. (4) Though not a very rapid means of conveyance, it is noted for its safeness. Messrs. Laroc Hemming, H. H. Nembard and L. Fletcher, also added many valuable hints and truths, in support of the present mode of conveyance. Mr. A. C. Mills then opened up his very spirited discussion on the proposed motor car service. He handled the subject admirably, and did not fail to put before the notice of all, the following important points and facts in support of the proposed car service: (1) The Island will become more popular and attractive. (2) Travelling will be made at a brisker rate, will be less expensive, and a source of real pleasure. (3) Mails and goods will be transferred at a rapid rate, and business in general will be sure to improve. (4) The roads will have to be put into proper order, hence there will be plenty of work for the labouring classes. (5) Higher prices will be paid for our produce, as the cost of conveyance will be greatly lessened, and produce from the interior parts of the Island will be taken to the seaports cheaper and more expeditiously. (6) The young men of the Island will have a chance to secure good employment in some department of the company's service. After a lengthy debate, Mr. W. J. Francis spoke very much in favour of the proposed car service, and encouraged members to look for a better and brighter future in Jamaica, and to always look on the bright side of things. Miss Lilian Francis and Mr. A. Beckford, also added quotas of warm discussion. At this juncture the worthy President summed up both

sides of the debate, and put same to the vote, by ballot. On the counting of votes, the proposed car service had a majority of nine votes over the present mode of conveyance. Miscellaneous matters then followed, when JOURNALS were distributed among members, and the following fixtures for next meeting arranged: (1) Reading by Miss L. Francis; (2) Solo by Mr. W. J. Francis; (3) Recitation by Mr. W. Smith; (4) Quartette by Messrs. E. Croskill and I. Henry, Misses E. Gohagen and R. Hemming; (5) Debate on Cane *vs.* Bananas. Mr. H. H. Nemhard will support the sugar cane and Mr. L. Hemming bananas. With National Anthem and Benediction, meeting terminated, after a very enjoyable and interesting meeting.—T. A. G. SMALL, Assistant and Reporting Secretary.

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Grand Cayman.—An interesting meeting of this Society was held in the Long Room at Government House, on July 6th. As the statutory meeting arranged for April was so badly attended on account of its being a stormy night, and the Secretary and Treasurer failing to turn up at the next meeting, it was decided that this be called a general meeting and that the officers be elected for the ensuing year. There were present: His Honour the Commissioner and Mrs. Hirst. Messrs. Edmund Parsons, J. R. Watler, Jos. Thos. Watler, Captain Creighton, Rev. R. C. Young, Mr. Darling Watler, Mr. J. J. Bird, Mrs. Edward Bennett, Misses Madora Miller and Rosamond Ebanks. Mr. Parsons proposed that the present Chairman, His Honour G. S. S. Hirst, be re-elected, and he thanked him on behalf of all the members of the Society, for the good work he had done—not only as President of the Society, but in the interests of the whole Island, etc. The proposal was seconded and unanimously agreed to. Mr. J. S. Webster, the honorary Secretary for the previous year, retired from that post in April and Mrs. Hirst acted as honorary Secretary until a meeting could be held in July. Mr. Parsons, on proposing that Mrs. Hirst be elected to fill the post for the ensuing year, said that he was sure all the members present were grateful to her for filling in the gap of the last three months, and after making a few kindly remarks *re* that lady's work, he proposed she be asked to take the position of "Indoor Secretary" to the Society. Mr. J. R. Watler seconded and Mrs. Hirst was elected unanimously. The Chairman in replying for Mrs. Hirst, thanked Mr. Parsons and all the members for their thoughtful recognition of the little work that she had done, and said that both he and Mrs. Hirst were anxious to do all they could for Cayman and when they left the Island they hoped to leave it no worse for their having lived there, but hoped rather to help on improvements and by entering heartily into the affairs of the Island, encouraging others to do so. Who should look after the live stock was then the question. After a little discussion it was decided that an "Outdoor Secretary" be appointed. The Rev. R. C. Young proposed that Mr. Darling Watler be elected; Captain Alexander Creighton seconded and with unanimous assent, Mr. Watler undertook the task on the condition that Captain Creighton lent a hand when necessary. A "Live Stock Committee," consisting of Mr. D. Watler, Captain Alex. Creighton and Mr. Joseph Watler, was then elected to attend to all live stock that the Society decided to import and to arrange the outside work at the next Show, which takes place in December. The members decided to import a bull into the Island and the Secretary was asked to write to Mr. Barclay to ask him to send a half-bred Shorthorn bull he had already recommended, along with two black Minorca cockerels also ordered. The Schedule presented was agreed upon by all present as suitable for Section 1, for the Society's Show, to be held in December next. The Chairman urged all present to exhibit things themselves and get all their friends to exhibit in all classes. Many things can be done in Cayman if only the people will come forward and show what they can do. The Schedule for Section 2, will be arranged at the September meeting. Several new mem-